

CLAIMS

1. A rinse aid composition comprising:
 - a) from about 0.01% and about 70%, by weight of the composition of a glasscare active salt;
 - b) at least one rinse aid component; and
 - c) optionally an adjunct material;wherein said glasscare active salt is at least partially encapsulated via at least one encapsulating agent which provides at least one encapsulating coating to said glasscare active salt.
2. A composition according to Claim 1, wherein said glasscare active salt has at least one of the following properties:
 - a) nonfriable,
 - b) water-soluble,
 - c) water-dispersible,
 - d) dissolves, disperses, and/or melts in a temperature range of from about 40° C to about 50° C,
 - e) is a core particle, an aggregate of core particles, a prill, an agglomerate, and combinations thereof; and
 - f) combinations thereof.
3. A composition according to Claim 1, wherein the release of said glasscare active salt to the wash and/or rinse liquor is triggered by the dissolution or disruption of said at least one encapsulating coating.
4. A composition according to Claim 3, wherein said liquid composition delivers from about 0.1 mM to about 10 mM of said glasscare active salt or complex to the rinse liquor.
5. A composition according to Claim 1, wherein said glasscare active salt comprises at least one of the following: aluminum, zinc, magnesium, calcium, lanthanum, tin, gallium, strontium, titanium, or combinations thereof.
6. A composition according to Claim 5, wherein said glasscare active salt comprises at least one of the following: water-soluble aluminum salt, water-insoluble aluminum salt, slightly water-

soluble aluminum salt, water-soluble zinc salt, water-insoluble zinc, slightly water-soluble zinc salt, water-soluble magnesium salt, water-insoluble magnesium salt, slightly water-soluble magnesium salt, water-soluble calcium salt, water-insoluble calcium salt, slightly water-soluble calcium salt, and mixtures thereof.

7 A composition according to Claim 6, wherein said aluminum salt is aluminum sulfate.

8. A composition according to Claim 1, wherein said at least one rinse aid component comprises at least one of the following: a surfactant, suds suppressor, carrier, hydrotrope, and mixtures thereof.

9. A composition according to Claim 1, wherein said dissolution or disruption of said at least one encapsulating coating occurs via a release mechanism triggered by at least one of the following: time, temperature, hardness, interfacial tension, pH-sensitive, mechanical action, ionic strength, dilution, or combinations thereof.

10. A composition according to Claim 1, wherein said at least one encapsulating agent comprises at least one of the following: fatty acids, polyvinyl alcohol, polyethylene glycols, builders, water-soluble cellulose and/or cellulose ether, polymers, polymer latex; polycarboxylate materials, ethylene vinyl acetate, polyvinyl alcohol, polyethylene waxes of melting point 50°-65° C, natural waxes, paraffin or microcrystalline waxes having melting points of 40°-94° C, liquid paraffin waxes, a alcohol waxes, synthetic resin, silicone oil, petroleum jelly, inorganic coatings, and mixtures thereof.

11 A composition according to Claim 10, wherein said at least one encapsulating agent comprises at least one of the following: polymer, polymer latex, polycarboxylate material, ethylene vinyl acetate, polyvinyl alcohol, and mixtures thereof.

12. A composition according to Claim 11, wherein said polymer comprises at least one of the following: natural gums, pectins, cellulose ethers, PVA, and mixtures thereof.

13. A rinse aid composition comprising:

- a) from about 0.01% and about 70%, by weight of the composition of a glasscare active salt;

- b) at least one rinse aid component; and
- c) an adjunct material;

wherein said composition is in the form of a cast solid, powder, tablet, and mixtures thereof; wherein said glasscare active salt is at least partially encapsulated via at least one encapsulating agent which provides at least one encapsulating coating to said glasscare active salt; and wherein said encapsulating coating is substantially free of low critical solution temperature polymers.

14. A composition according to Claim 13, wherein said glasscare active salt is in the form of a core particle, aggregate of core particles, prill, agglomerate, and mixtures thereof and is nonfriable, water-soluble or water dispersible or which dissolve, disperse or melt in a temperature range of from about 40° C to about 50° C.

15. A composition according to Claim 13, wherein the release of said glasscare active salt to the wash and/or rinse liquor is triggered by the dissolution or disruption of said at least one encapsulating coating.

16. A composition according to Claim 15, wherein said liquid composition delivers from about 0.1 mM to about 10 mM of said glasscare active salt or complex to the rinse liquor.

17. A composition according to Claim 13, wherein said glasscare active salt comprises at least one of the following: aluminum, zinc, magnesium, calcium, lanthanum, tin, gallium, strontium, titanium, or combinations thereof.

18. A composition according to Claim 17, wherein said glasscare active salt comprises at least one of the following: water-soluble aluminum salt, water-insoluble aluminum salt, slightly water-soluble aluminum salt, water-soluble zinc salt, water-insoluble zinc, slightly water-soluble zinc salt, water-soluble magnesium salt, water-insoluble magnesium salt, slightly water-soluble magnesium salt, water-soluble calcium salt, water-insoluble calcium salt, slightly water-soluble calcium salt, and mixtures thereof.

19. A composition according to Claim 18, wherein said aluminum salt is aluminum sulfate.

20. A composition according to Claim 13, wherein said at least one rinse aid component comprises at least one of the following: a surfactant, suds suppressor, carrier, hydrotrope, and mixtures thereof.

21. A composition according to Claim 13, wherein said dissolution or disruption of said at least one encapsulating coating occurs via a release mechanism triggered by at least one of the following: time, temperature, hardness, interfacial tension, pH-sensitive, mechanical action, ionic strength, dilution, and combinations thereof.

22. A composition according to Claim 13, wherein said at least one encapsulating agent is selected from group consisting of fatty acids, polyvinyl alcohol, polyethylene glycols, builders, water-soluble cellulose, non-low critical solution polymer, polymer latex; polycarboxylate materials, ethylene vinyl acetate, polyvinyl alcohol, polyethylene waxes of melting point 50°-65° C, natural waxes, paraffin or microcrystalline waxes having melting points of 40°-94° C, liquid paraffin waxes, a alcohol waxes, synthetic resin, silicone oil, petroleum jelly, inorganic coatings, and mixtures thereof.

23. A composition according to Claim 22, wherein said at least one encapsulating agent comprises at least one of the following: non-low critical solution polymer, polymer latex, polycarboxylate material, ethylene vinyl acetate, polyvinyl alcohol, and mixtures thereof.

24. A composition according to Claim 23, wherein said non-low critical solution polymer is substantially free of alkylated and/or hydroxyalkylated polysaccharides, cellulose ethers, polyisopropylacrylamine, copolymers of polyisopropylacrylamide, and mixtures thereof.

25. A composition according to Claim 1, wherein said composition is in the form of a unit dose which allows for the controlled release of said encapsulated glasscare active salt during the wash and/or rinse cycle of said automatic dishwashing appliance; wherein said unit dose is provided as a single or multi-compartment water-soluble pouch.

26. A composition according to Claim 13, wherein said composition is in the form of a unit dose which allows for the controlled release of said glasscare active salt during the wash and/or rinse cycle of said automatic dishwashing appliance; wherein said unit dose is provided as a tablet, single or multi-compartment water-soluble pouch, and combinations thereof.

27. A method of rinsing and protecting glassware comprising the step of rinsing said glassware in an automatic dishwashing machine with a rinse aid composition according to Claim 1.

28. A method of rinsing and protecting glassware comprising the step of rinsing said glassware in an automatic dishwashing machine with a rinse aid composition comprising:

- a) an encapsulated glasscare active salt comprising aluminum, zinc, magnesium, calcium, lanthanum, tin, gallium, strontium, titanium, and combinations thereof;
- b) at least one rinse aid component comprising a surfactant, suds suppressor, carrier, hydrotrope, and mixtures thereof; and
- d) optionally an adjunct comprising sodium-based anti-corrosion agents, dyes, colorants, free radical inhibitors, polymers, anti-filming agents, anti-spotting agents, germicides, fungicides, bleaching system, bleach scavengers, general dishcare agents, and mixtures thereof;

wherein said composition is in the form of a cast solid, powder, tablet, and mixtures thereof; wherein said glasscare active salt is at least partially encapsulated via at least one encapsulating agent which provides at least one encapsulating coating to said glasscare active salt; and wherein said encapsulating coating is substantially free of low critical solution temperature polymers.

29. A kit comprising:

- (a) a package;
- (b) instructions for use; and
- (c) a rinse aid composition comprising:
 - (i) an encapsulated glasscare active salt comprising aluminum, zinc, magnesium, calcium, lanthanum, tin, gallium, strontium, titanium, and combinations thereof;
 - (ii) at least one rinse aid component comprising a surfactant, suds suppressor, carrier, hydrotrope, and mixtures thereof; and
 - (iii) optionally an adjunct material;

wherein said composition delivers from about 0.1 mM to about 10 mM of the glasscare active salt or complex in the wash and/or rinse cycle; wherein said composition is a cast solid, powder, liquid, liquid-gel, gel, and mixtures thereof; wherein when said composition is a cast solid or powder, said solid composition is substantially free of low critical solution temperature polymers;

and wherein said composition is optionally provided as a tablet or contained in a single or multi-compartment water-soluble pouch.